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The Low-Mass X-ray Binary X1832−330 in the Globular Cluster NGC 6652: A Serendipitous ASCA Observation

Koji Mukai1 and Alan P. Smale1 Code 662, NASA/Goddard Space Flight Center, Greenbelt, MD 20771, USA.
1Also Universities Space Research Association

abstract

The Low Mass X-ray Binary (LMXB) in is one of 12 bright, or transient, X-ray sources to have been discovered in Globular Clusters. We report on a serendipitous *ASCA* observation of this Globular Cluster LMXB, during which a Type I burst was detected and the persistent, non-burst emission of the source was at its brightest level recorded to date. No orbital modulation was detected, which argues against a high inclination for the system. The spectrum of the persistent emission can be fit with a power law plus a partial covering absorber, although other models are not ruled out. Our time-resolved spectral analysis through the burst shows, for the first time, clear evidence for spectral cooling from kT=2.4±0.6 keV to kT=1.0±0.1 keV during the decay. The measured peak flux during the burst is ∼10% of the Eddington luminosity for a $1.4M_{\odot}$ neutron star. These are characteristic of a Type I burst, in the context of the relatively low quiescent luminosity of .